WHAT IS CLAIMED IS:

1. A method of supplying workpieces to a plurality of workstations, each of said workstations being operable to generate and transmit a call signal, a ready signal, and an error signal, said method comprising the steps of:

(a.) receiving all call, ready and error signals transmitted from the workstations;

(b.) for all received call signals, determining a selected one of the call signals, which is the oldest one of the call signals that has not been responded to and has not come from a workstation that has also transmitted an error signal;

(c.) responding to the selected one of the call signals by moving a selected one of the workpieces from an input area to a selected one of the workstations, which is the workstation that transmitted the selected one of the call signals;

(d.) determining if a ready signal or an error signal has been received from the selected one of the workstations;

(e.) if an error signal has been received from the selected one of the workstations, returning directly to step (b.);

(f.) if neither a ready signal, nor an error signal has been received from the selected one of the workstations, returning to step (d.); and

(g.) if a ready signal has been received from the selected one of the workstations, loading the selected one of the workpieces into the selected one of the workstations; and

(h.) returning to step (b.).

2. The method of claim 1, wherein step (g.) further comprises the substep of unloading a worked-upon one of the workpieces from the selected one of the

workstations before the selected one of the workpieces is loaded into the selected one of the workstations.

3. The method of claim 2, further comprising:

step (i.) moving the worked-upon one of the workpieces to a drop-off station; and

wherein step (i.) is performed between steps (g.) and (h.).

4. The method of claim 1, wherein step (a.) comprises the non-sequential sub-steps of (a1.) receiving a call signal, (a2.) receiving an error signal, and (a3.) receiving a ready signal, and wherein

sub-step (a1) is performed any time during the performance of the method when one of the workstations transmits a call signal;

sub-step (a2) is performed any time during the performance of the method when one of the workstations transmits an error signal; and

sub-step (a3) is performed any time during the performance of the method when one of the workstations transmits a ready signal.

5. The method of claim 1, wherein the oldest one of the call signals is determined based upon the time of receipt of the call signals.

6. The method of claim 1, wherein steps (c.) and (g.) are performed by an autoloader.

7. The method of claim 1, wherein the workstations all perform the same type of operation on the workpieces.

8. The method of claim1, wherein the workpieces are unfinished crankshafts.

9. A method of controlling an autoloader that supplies workpieces to a plurality of workstations, wherein the autoloader comprises a carriage mounted to a guidance structure and moveable along the length of the guidance structure, said carriage including at least one gripper, and wherein each of said workstations is operable to generate and transmit a call signal, a ready signal, and an error signal, and wherein said method comprises the steps of:

(a.) receiving all call, ready and error signals transmitted from the workstations;

(b.) for all received call signals, determining a selected one of the call signals, which is the oldest one of the call signals that has not been responded to and has not come from a workstation that has also transmitted an error signal;

(c.) moving the carriage to the input area;

(d.) using the at least one gripper, picking up and holding a selected one of the workpieces in the input area;

(e.) responding to the selected one of the call signals by moving the carriage with the selected one of the workpieces to a selected one of the workstations, which is the workstation that transmitted the selected one of the call signals;

(f.) determining if a ready signal or an error signal has been received from the selected one of the workstations;

(g.) if an error signal has been received from the selected one of the workstations, returning to step (b.); and

(h.) if neither a ready signal, nor an error signal has been received from the selected one of the workstations, returning to step (f.);

(i.) if a ready signal has been received from the selected one of the workstations, loading the selected one of the workpieces into the selected one of the workstations, using the at least one gripper; and

(j.) returning to step (b.).

10. The method of claim 9, wherein step (i.) further comprises the substep of using the at least one gripper to unload a worked-upon one of the workpieces

from the selected one of the workstations before the selected one of the workpieces is loaded into the selected one of the workstations.

11. The method of claim 10, further comprising the steps of

(k.) moving the carriage with the worked-upon one of the workpieces to a drop-off station; and

(l.) depositing the worked-upon one of the workpieces in the drop-off station, using the at least one gripper; and

wherein steps (k.) and (l.) are performed between step (i.) and step (j.).

12. The method of claim 11, wherein in an initial cycle of the method, steps (c.) and (d.) are performed before step (b.) and in subsequent cycles of the method, steps (c.) and (d.) are performed after steps (k.) and (l.) and before step (j.).

13. The method of claim12, wherein the at least one gripper comprises a pair of grippers for holding the selected one of the workpieces and the worked-upon one of the workpieces, respectively.

14. The method of claim 9, wherein step (a.) comprises the non-sequential sub-steps of (a1.) receiving a call signal, (a2.) receiving an error signal, and (a3.) receiving a ready signal, and wherein

sub-step (a1) is performed any time during the performance of the method when one of the workstations transmits a call signal;

sub-step (a2) is performed any time during the performance of the method when one of the workstations transmits an error signal; and

sub-step (a3) is performed any time during the performance of the method when one of the workstations transmits a ready signal.

15. The method of claim 9, wherein the oldest one of the call signals is determined based upon the time of receipt of the call signals.

16. The method of claim 9, wherein the workstations all perform the same type of operation on the workpieces.

17. The method of claim 9, wherein the workpieces are automotive crankshafts.

18. A method of supplying workpieces to a plurality of workstations, each of said workstations being operable to generate and transmit a call signal and an error signal, said method comprising the steps of:

(a.) receiving all call and error signals transmitted from the workstations; and

(b.) supplying each of the workstations that transmits a call signal and not an error signal with one of the workpieces; and

wherein step (b.) is performed such that the workpieces are supplied to the workstations based on the chronological order of the receipt of the call signals from the workstations, such that the workstation that transmits a first received one of the call signals is supplied with one of the workpieces first.

19. The method of claim 18, wherein step (b.) comprises the sub-steps of:

(b1.) moving one of the workpieces from an input area to one of the workstations that transmitted a call signal;

(b2.) determining whether said one of the workstations has transmitted an error signal; and

(b3.) if said one of the workstations has transmitted an error signal, moving said one of the workpieces to a next one of the workstations that transmitted a call signal that was received subsequent to the call signal from said one of the workstations.

20. The method of claim 19, wherein the workpieces are automotive crankshafts.

21. A method of moving a workpiece through a work line comprising a plurality of zones, wherein each zone comprises a plurality of workstations that perform the same type of operation, and wherein each workstation is operable to generate and transmit a call signal and an error signal, said method comprising the steps of:

(a.) receiving all call and error signals transmitted from the workstations in a first one of the zones;

(b.) for all received call signals from the workstations in the first one of the zones, determining a selected one of the call signals, which is the oldest one of the call signals that has not been responded to and has not come from a workstation that has also transmitted an error signal;

(c.) responding to the selected one of the call signals by moving the workpiece from a first input area to a selected one of the workstations in the first one of the zones, which is the workstation that transmitted the selected one of the call signals;

(d.) working on the workpiece in the selected one of the workstations;

(e.) after step (d.), moving the workpiece to a second input area;

(f.) receiving all call and error signals transmitted from the workstations in a second one of the zones; and

(g.) for all received call signals from the workstations in the second one of the zones, determining a second selected one of the call signals, which is the oldest one of the call signals that has not been responded to and has not come from a workstation that has also transmitted an error signal;

(h.) responding to the second selected one of the call signals by moving the workpiece from the second input area to a second selected one of the workstations in the second one of the zones, which is the workstation that transmitted the second selected one of the call signals;

(i.) working on the workpiece in the second selected one of the workstations; and

(j.) after step (i.), moving the workpiece to a third input area.

22. The method of claim 21, wherein each workstation is further operable to generate and transmit a ready signal, and wherein the method further comprises the steps of:

(k.) determining if a ready signal or an error signal has been received from the selected one of the workstations;

(l.) if an error signal has been received from the selected one of the workstations, returning directly to step (b.);

(m.) if neither a ready signal, nor an error signal has been received from the selected one of the workstations, returning to step (k.); and

(n.) if a ready signal has been received from the selected one of the workstations, loading the workpiece into the selected one of the workstations;

(o.) determining if a ready signal or an error signal has been received from the second selected one of the workstations;

(p.) if an error signal has been received from the second selected one of the workstations, returning directly to step (g.);

(q.) if neither a ready signal, nor an error signal has been received from the second selected one of the workstations, returning to step (o.); and

(r.) if a ready signal has been received from the second selected one of the workstations, loading the workpiece into the second selected one of the workstations; and

wherein steps (k.), (l.), (m) and (n) are performed between steps (c.) and (d.), and wherein steps (o.), (p.), (q.) and (r.) are performed between steps (h.) and (i.).

23. The method of claim 22, wherein step (a.) comprises the non-sequential sub-steps of (a1.) receiving a call signal, (a2.) receiving an error signal, and (a3.) receiving a ready signal, wherein:

sub-step (a1) is performed any time during the performance of the method when one of the workstations in the first one of the zones transmits a call signal;

sub-step (a2) is performed any time during the performance of the method when one of the workstations in the first one of the zones transmits an error signal; and

sub-step (a3) is performed any time during the performance of the method when one of the workstations in the first one of the zones transmits a ready signal; and

wherein step (f.) comprises the non-sequential sub-steps of (f1.) receiving a call signal, (f2.) receiving an error signal, and (f3.) receiving a ready signal, and wherein:

sub-step (f1) is performed any time during the performance of the method when one of the workstations in the second one of the zones transmits a call signal;

sub-step (f2) is performed any time during the performance of the method when one of the workstations in the second one of the zones transmits an error signal; and

sub-step (f3) is performed any time during the performance of the method when one of the workstations in the second one of the zones transmits a ready signal.

24. The method of claim 21, wherein step (c.) is performed by a first autoloader and step (h.) is performed by a second autoloader.

25. The method of claim 24, wherein the workstations in the first one of the zones performs a different operation than the workstations in the second one of the zones.

26. The method of claim 21, wherein the workpiece is an unfinished crankshaft.